

REMARKS

Claims 1-18 stand rejected, of which claims 1, 6, 10, and 12 are independent.

Reconsideration of the application is respectfully requested.

Rejections Under 35 U.S.C. §102

The Examiner rejected claims 1-9, 12-14 and 18 under 35 U.S.C. § 102(e) as being anticipated by Klein (U.S. Pat. No. 6,065,069). With specific regard to the independent claims, the Examiner stated:

Klein discloses:

- an electromagnetic energy source (fig. 6, 620) located on a first side of a system board proximate an connector (fig. 6, 610)
- the electromagnetic energy source for generating electromagnetic energy directed at least toward a second opposing side of the system board; (col. 4, lines 39-54), (col. 5, claim 12)
- an electromagnetic energy detector (fig. 6, 600) located on the second side of the system board the electromagnetic energy detector for detecting a presence of electromagnetic energy when a hot-pluggable component is not mated to the connector and the electromagnetic energy is thereby unobstructed by the hot-pluggable component, the electromagnetic energy detector further for detecting an absence of electromagnetic energy when the hot-pluggable is mated to the connector and the electromagnetic energy is thereby obstructed by the hot-pluggable component. (col. 4, lines 39-54), (col. 5, line 12)

Applicants respectfully traverse this rejection. Anticipation under section 102 can be found only if a single reference shows exactly what is claimed. *Titanium Metals Corp. v. Banner*, 778 F.2d 775, 227 U.S.P.Q. 773 (Fed. Cir. 1985). For a prior art reference to anticipate under section 102, every element of the claimed invention must be identically shown in a single reference. *In re Bond*, 910 F.2d 831, 15 U.S.P.Q.2d 1566 (Fed. Cir. 1990). To maintain a proper rejection under section 102, a single reference must teach each and

every element or step of the rejected claim. *Atlas Powder v. E.I. du Pont*, 750 F.2d 1569 (Fed. Cir. 1984). Thus, if the claims recite even one element not found in the cited reference, the reference does not anticipate the claimed invention.

Independent claim 1 recites an electromagnetic energy source located on a first side of a system board proximate a connector, for generating electromagnetic energy to a second opposing side of the system board. Claim 1 further recites an electromagnetic energy detector located on the second side of the system board, for detecting the presence or absence of electromagnetic energy depending on whether a hot-pluggable component is mated to the connector. Similarly, independent claim 6 recites a means for generating electromagnetic energy located on a first side of a system board proximate a connector, the electromagnetic energy directed to a second opposing side of the system board. Claim 6 further recites a means for detecting electromagnetic energy located on the second side of the system board, for detecting the presence or absence of electromagnetic energy depending on whether a hot-pluggable component is mated to the connector. Independent claim 12 recites a method for detecting the presence of a hot-pluggable component comprising the steps of generating electromagnetic energy on a first side of a system board proximate a connector, and detecting a presence or absence of electromagnetic energy on the second opposing side of the system board depending on whether a hot-pluggable component is mated to the connector. Based on the similarity of subject matter recited in each of the independent claims, the claims are discussed together below.

The Examiner correlates the optical reflector 620 in the Klein reference with the electromagnetic energy source recited in the present claims. Applicants respectfully traverse this assertion. The present claims recite an electromagnetic energy source “for generating

electromagnetic energy.” Clearly, the optical reflector 620 of Klein cannot be fairly characterized as “generating electromagnetic energy.” As clearly stated in the Klein reference, the optical reflector 620 *reflects* an optical signal 605 produced by the sensor 600. Col. 4, lines 38-44. The Examiner’s assertion that the optical reflector 620 *generates* electromagnetic energy is simply unsupported by the Klein reference. As stated in the Klein reference, the sensor 600 produces the optical signal 605. Col. 4, lines 39-40. For this reason alone, the Examiner’s characterization of the optical reflector 620 as the electromagnetic energy source recited in the present claims is unsupportable.

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Even if the optical reflector 620 could generate electromagnetic energy, the optical reflector 620 is not located on a first side of a system board. The present claims recite “an electromagnetic energy source” or “means for generating electromagnetic energy located on a first side of a system board proximate an [*sic*] connector.” While it is not entirely clear from the brief description corresponding to Fig. 6 in the Klein reference, it would appear that the optical reflector 620 is *not* located on a system board proximate a connector. See Fig. 6; Col. 4, lines 39-54. It would appear from Fig. 6 and the accompanying description that the optical reflector 620 is inside of the connector 610 or somewhere completely external to the portable computer system 200. Regardless, it is clear that the optical reflector is not located on a system board proximate a connector. Accordingly, the Examiner’s characterization of the optical reflector 620 as the “electromagnetic energy source located on a first side of a system board proximate a connector,” as recited in the present claims, is not supportable.

Further, it is also clear that while the sensor 600 produces an optical signal 605, the sensor 600 cannot possibly be correlated with the electromagnetic energy source recited in the present claims, either. As discussed above, the present claims recite “an electromagnetic

energy source located on a first side of a system board” and “an electromagnetic energy detector located on the second side of the system board.” As described in the passages cited by the Examiner, Klein discloses an optical sensor 600 that produces an optical signal 605. The optical signal 605 may be reflected back to the optical sensor 600, such that the optical sensor 600 can detect the optical signal 605. Because the optical sensor 600 both generates *and* detects the optical signal, it is clear that Klein cannot possibly disclose an electromagnetic energy source *located on a first side of a system board* and an electromagnetic energy detector *located on a second side of a system board*. To be clear, the optical sensor 600 cannot possibly be located on a first side of a system board *and* located on a second side of the system board, since Klein discloses a single element (optical sensor 600) that performs both the generation and the detection of the optical signal. Accordingly, Klein does not disclose all of the elements recited in the present claims.

In view of the remarks set forth above, Applicants respectfully submit that the subject matter of independent claims 1, 6 and 12 is not anticipated by the Klein reference. Because the Klein reference fails to recite each of the elements claimed in the independent claims, Applicants further submit that each of the claims dependent thereon are also allowable based on the deficiencies of the Klein reference described with respect to the independent claims. Accordingly, Applicants respectfully request withdrawal of the Examiner’s rejection and allowance of claims 1-9, 12-14 and 18.

Rejections Under 35 U.S.C. §103

The Examiner rejected claims 10, 11 and 15-17 under 35 U.S.C. § 103(a) as being unpatentable over Klein. In relevant part, the Examiner stated:

Klein discloses the limitations as discussed as above which show first source and first detector. However, Klein fails to show a 2nd source and a 2nd detector. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the additions of a 2nd source and 2nd detector, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art.

Applicants respectfully traverse this rejection. The burden of establishing a *prima facie* case of obviousness falls on the Examiner. *Ex parte Wolters and Kuypers*, 214 U.S.P.Q. 735 (PTO Bd. App. 1979). Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention absent some teaching or suggestion supporting the combination. *ACS Hospital Systems, Inc. v. Montefiore Hospital*, 732 F.2d 1572, 1577, 221 U.S.P.Q. 929, 933 (Fed. Cir. 1984). For a single prior art reference, the mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification. *See In re Fritch*, 23 U.S.P.Q.2d 1780, 1783-84 (Fed. Cir. 1992). Accordingly, to establish a *prima facie* case, the Examiner must not only show that the combination or modification includes *all* of the claimed elements, but also a convincing line of reason as to why one of ordinary skill in the art would have found the claimed invention to have been obvious in light of the teachings of the references. *See Ex parte Clapp*, 227 U.S.P.Q. 972 (B.P.A.I. 1985).

Independent claim 10 recites the limitations described above with respect to independent claim 1, and in addition, recites “a second electromagnetic source located on a first side of the system board” and “a second electromagnetic detector located on the second side of the system board.” As discussed above with regard to the rejections under 35 U.S.C. § 102, the Klein reference does not disclose or suggest an electromagnetic energy source and an electromagnetic energy detector having the limitations recited in the present claims. For

this reason alone, it is clear that the Klein reference does not disclose all of the elements recited in claim 10, much less disclose a second source and second detector, as further recited in claim 10. While the Examiner asserts that it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art, the Examiner has failed to cite a case holding such. Applicants traverse the Examiner's assertion and the applicability of the assertions regarding mere duplication to the presently recited subject matter. If the Examiner chooses to maintain this rejection, Applicants respectfully request that the Examiner cite a case, rule or statute in support of the rejections such an appropriate response can be provided.

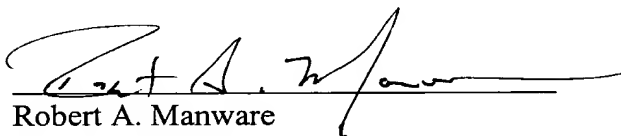
In view of the remarks set forth above, Applicants respectfully submit that the subject matter of independent claim 10 is not rendered obvious by the cited reference. For *at least* the reasons set forth above, it is clear that the present claims recite elements that are not found in the Klein reference. Because the Klein reference fails to disclose each of the elements recited in independent claims 10 and 12, Applicants further submit that each of the claims dependent thereon are also allowable. Accordingly, Applicants respectfully request withdrawal of the Examiner's rejection and allowance of claims 10, 11 and 15-17.

Conclusion

In view of the remarks set forth above, Applicants respectfully request allowance of claims 1-18. If the Examiner believes that a telephonic interview will help speed this application toward issuance, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,

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